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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/590,919	06/09/2000	Joseph W. Fikes	04026.0013	3171

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EXAMINER	
PHAM, HOA Q	

ART UNIT	PAPER NUMBER
2877	

DATE MAILED: 03/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/590,919	Applicant(s) FIKES ET AL.	
	Examiner Hoa Q. Pham	Art Unit 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 December 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 9-23* is/are rejected.

7)☒ Claim(s) *6-8* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 2, 9-12, 14-15, and 21-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Purcell (4,936,683).

Regarding claims 1 and 21-23, Purcell discloses an optical tablet construction comprises an elongated retro-reflective member (72), a first light source (17), a second light source (18), a first light sensor (19), a second light sensor (20) and a processor (44), for determining the position of target (10). See figures 4 and 6.

Regarding claim 2, see figure 6 for the first and second reflectors (71, 72).

Regarding claim 9, a frame (11) is used for mounting the first light source, second light source, first sensor, second sensor, and retro-reflective members. See figures 1 and 3.

Regarding claim 10, since the target is a cursor, thus the mouse is a holder.

Regarding claims 11-12, see abstract for linear image sensor and figure 4 for microprocessor.

Regarding claim 14, see column 7, lines 27-31 for visible or infrared light.

Regarding claim 15, see column 6, line 51, for CCD camera.

3. Claims 1, 2, 9-12, 14-15, and 21-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Bures (5,220,409).

Regarding claims 1 and 21-23, Bures discloses an apparatus and method for determining the position of an object comprises an elongated retro-reflective member (30, 44), a first light source (F.O.X), a second light source (F.O.Y), a first light sensor (X10L, X20R, etc...), a second light sensor (Y20L, Y20R, etc...) and a processor (not shown), for determining the position of target (S). See figures 2 and 6.

Regarding claim 2, see figures 2 and 6 for the first and second reflectors (30, 34, 44).

Regarding claim 9, it is inherent that a frame is used for mounting the first light source, second light source, first sensor, second sensor, and retro-reflective members.

Regarding claims 11-12 and 14-15, see column 8, lines 22-24 for light source and CCD camera.

Claim R jections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 3-5, 13, 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purcell or Bures in view of Butts (5,871,215).

Regarding claims 3-5, Purcell and Bures do not explicitly teach that the retro-reflective member comprises a plurality of corner reflectors, retro-reflective tape, or a plurality of glass beads. However, such a feature is known in the art, for example, as taught by Butts. Butts, from the same field of endeavor, teaches a plurality of corner cube reflectors (52) can be used as a retro-reflective member (column 6 lines 4-17). Those of ordinary skill in the art at the time the invention was made to replace the retro-reflective member of Purcell or Bures by a plurality of corner cube reflectors taught by Butts or a plurality of glass beads or retro-reflective tape as now claimed by the present invention. The rationale for this modification would have arisen from the fact that it does not matter what types of reflectors the device would function in the same manner. A substitution for each other is generally recognized as being within the level of ordinary skill in the art.

Regarding claims 13 and 16-20, Purcell and Bures teach that the light source is a lamp array and within the visible or infrared range. Those of ordinary skill in the art at the time the invention was made to replace the light source of Purcell or Bures by an

incandescent lamp and a curved mirror for reflecting light because they are function in the same manner.

Allowable Subject Matter

6. Claims 6-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments, filed 12/23/02, with respect to claims 1-5 and 9-23 have been fully considered and are not persuasive.

a. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., **retro-reflective means having the ability to reflect a ray of light substantially in the direction of its source**) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). **Thus, the reflective mirror (72) of Purcell is considered as retro-reflective means.**

b. With respect to claims 11 and 12, as understood, a "virtual image" is "an image from which rays of refracted or reflected light seem to diverge, as from an image observed in a plane mirror" and as seen from Purcell, it is inherent that the linear image

sensor receives an image from which rays of light reflected from the plane mirror. Thus, a "virtual image" is inherent in Purcell.

c. Regarding claim 10, applicant argues that the target of the present invention is not the same as cursor of Purcell. Applicant is note that the term "target" is so broad that can read on the cursor of Purcell.

d. With respect to the argument on the reference of Bures, as mentioned above, applicant fails to claim a specific feature of the retro-reflective means. Thus, the holographic plate and the parabolic mirror can be read as retro-reflective member.

e. Applicant argues that Bures does not use a laser as required by claim 14. The argument is not deemed to be persuasive because Bures does teach the use of laser (see column 8, lines 44-45).

f. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, one skill in the art known that the "mirrors and microlouvers" of Purcell are equivalent to "retro-reflective member" as claimed, thus it would have been obvious to one having ordinary skill in the art to substitute for each other because they equivalent in function.

g. Applicant argues that the references do not teach the use of an incandescent lamp as now claimed in claim 16. Those of ordinary skill in the art would know how to replace the light source of Purcell or Bures by an incandescent lamp because they are function in the same manner.

In view of the foregoing, it is believed that the rejections under 35 U.S.C 102 and 103 are proper.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa Q. Pham whose telephone number is (703) 308-4808. The examiner can normally be reached on 6:30 AM to 5 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (703) 308-4881. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Hoa Q. Pham
Primary Examiner
Art Unit 2877

HP
March 12, 2003